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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,586	05/24/2002	Hans Lander	10191/2175	6461

26646 7590 05/26/2005

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NEW YORK, NY 10004

EXAMINER
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HWU, DAVIS D

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/030,586

Applicant(s)

LANDER ET AL.

Examiner

Davis D. Hwu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's appeal brief of May 13, 2005 is acknowledged and entered.
2. The final rejection of September 10, 2004 is hereby withdrawn and this application is re-opened for prosecution in light of a new reference.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 103***

4. Claims 16, 19, and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pontoppidan in view of Rhoades.

Pontoppidan discloses a fuel injector for an internal combustion engine having an externally supplied ignition, the fuel injector comprising a fuel inlet, a movable valve closure member 9, a fixed valve seat 8 as recited, and a downstream valve end including a component 12 and a fuel outlet, wherein the fuel outlet includes at least one discharge orifice 7 of the component, the at least one discharge orifice is arranged downstream of the fixed valve seat, the component including a coating 14 around the at least one discharge orifice 7 including at least in an immediate exterior of an outlet area of the least one discharge orifice (see Figure 2). Rhoades teaches a method of making a fuel injector in which the fuel injector comprises discharge orifices which are coated with PTFE which contains fluorine in order to attain precise flow resistance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Pontoppidan by providing a coating comprising PTFE around the at least one discharge orifice as taught by

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Rhoades in order to attain precise flow resistance. The method of coating a surface via spraying as recited in claim 24 is well known in the art.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pontoppidan in view of Rhoades as applied to claim 16 above, and further in view of Fedorovich.

Fedorovich et al. teaches coating internal combustion engines with fluorosilicate to improve heat resistance of the various surfaces of the engines. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Pontoppidan and Rhoades by providing a coating comprising fluorosilicate as taught by Fedorovich et al. in order to provide heat resistance.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pontoppidan in view of Rhoades as applied to claim 16 above, and further in view of Otomo et al.

Otomo et al. teaches coating gaskets with heat and corrosion resistant PTFE. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Pontoppidan and Rhoades by providing coating comprising PTFE as taught by Otomo et al. to resist heat and corrosion of the discharge orifice.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pontoppidan in view of Rhoades as applied to claim 16 above, and further in view of Komaroff et al.

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Komaroff et al. teaches an internal combustion comprising an auto- ignition in which the auto-ignition is known to prevent the problem of having to convert time variables into angle variables as required in a spark-ignition engine. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Pontoppidan and Rhoades by providing the engine with an auto-ignition as taught by Komaroff et al. to prevent the problem of having to convert time variables into angle variables as required in a spark-ignition engine.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis D. Hwu whose telephone number is 571-272-4904. The examiner can normally be reached on 8:00-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4919. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.



Davis Hwu

DAVIS HWU  
PRIMARY EXAMINER